

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 3-4 and 6-7 have been amended and claims 8-11 have been added as follows:

Listing of Claims:

Claim 1 (currently amended): A system for tilting polarization and steering main beam of airship antenna using GPS, ~~wherein~~, comprising:

a 1st GPS receiver, which is located in the airship;

a 2nd GPS receiver, which is located in the ground station;

an airship antenna database for extracting the radiation pattern information of airship antenna and polarization information according to the posture of the antenna based on the position information of the airship;

a ground station antenna database for extracting the radiation pattern information of ground station antenna and polarization information according to the posture of the antenna based on the position information of the ground station;

a polarization and main beam direction correction operating device for computing the correction value of polarization and main beam direction of the airship antenna and the ground station antenna based on the position information of the airship and the ground station received from the 1st GPS receiver and the 2nd GPS receiver; and

an airship antenna controller for correcting the posture of the airship antenna by controlling tilting the polarization and steering the main beam direction of the airship antenna based on the

corrected value received from the polarization and main beam direction correction operating device.

Claim 2 (original): The system for tilting polarization and steering main beam of airship antenna using GPS in claim 1, further comprising:

a ground station antenna correcting device for correcting the posture of the ground station antenna by controlling tilting the polarization and steering the main beam direction of the ground station antenna based on the corrected value received from the polarization and main beam direction correction operating device.

Claim 3 (currently amended): The system for tilting polarization and steering main beam of airship antenna using GPS in claim 1 [[or 2]], wherein[,] the airship antenna controller ~~comprising~~ comprises:

an airship antenna polarization tilting controlling unit for generating polarization tilting control signal of the airship antenna based on polarization correction value received from the correction value output device;

an airship antenna main beam steering controlling unit for generating main beam steering control signal of the airship antenna based on main beam direction correction value received from the correction value output device; and

an airship antenna driving unit for driving the airship antenna to correct the posture of the airship based on the control signals received from the airship antenna polarization tilting controlling unit and the airship antenna main beam steering controlling unit.

Claim 4 (currently amended): The system for tilting polarization and steering main beam of airship antenna using GPS in claim 1 [[or 2]], wherein[,] the polarization and main beam direction correction operating device ~~comprising~~ comprises:

an azimuth and elevation operating unit for computing the azimuth and elevation between the airship and the ground station based on the position information of the airship^{*} and the ground station received from the 1st GPS receiver and the 2nd GPS receiver;

a polarization correction operating unit for computing polarization correction value between the airship and the ground station based on the azimuth and elevation information received from azimuth and elevation operating unit and information received from the airship antenna database and the ground station antenna database; and

a main beam direction correction operating unit for computing main beam correction value between the airship and the ground station based on the azimuth and elevation information received from azimuth and elevation operating unit and information received from the airship antenna database and the ground station antenna database.

Claim 5 (currently amended): The system for tilting polarization and steering main beam of airship antenna using GPS in claim 2 wherein, the ground station controller ~~comprising~~ comprises:

a ground station antenna polarization tilting controlling unit for generating polarization tilting control signal of the ground station antenna based on polarization correction value received from the correction value output device;

a ground station antenna main beam steering controlling unit for generating main beam steering control signal of the ground station antenna based on main beam direction correction value received from the correction value output device; and

a ground station antenna driving unit for driving the airship antenna to correct posture of the airship based on the control signals received from the ground station antenna polarization tilting controlling unit and the ground station antenna main beam steering controlling unit.

Claim 6 (currently amended): The system for tilting polarization and steering main beam of airship antenna using GPS in claim 1 [[or 2]], wherein[[,]] the airship antenna database ~~comprising~~ comprises:

an airship antenna polarization information extracting unit for extracting the information of polarization according to the posture of the airship antenna based on position information of the airship received from the 1st GPS receiver; and

an airship antenna main beam direction information extracting unit for extracting information of radiation pattern of the airship antenna based on the position information of the airship received from the 1st GPS receiver.

Claim 7 (currently amended): The system for tilting polarization and steering main beam of airship antenna using GPS in claim 1 [[or 2]], wherein the airship antenna database ~~comprising~~ comprises:

a ground station antenna polarization information extracting unit for extracting the

information of polarization according to posture of the ground station antenna 160 based on position information of the ground station received from the 2nd GPS receiver; and

a ground station antenna main beam direction information extracting unit for extracting the information of radiation pattern of the ground station antenna based on position information of the ground station received from the 2nd GPS receiver.

Claim 8 (new): The system for tilting polarization and steering main beam of airship antenna using GPS in claim 2, wherein the airship antenna controller comprises:

an airship antenna polarization tilting controlling unit for generating polarization tilting control signal of the airship antenna based on polarization correction value received from the correction value output device;

an airship antenna main beam steering controlling unit for generating main beam steering control signal of the airship antenna based on main beam direction correction value received from the correction value output device; and

an airship antenna driving unit for driving the airship antenna to correct the posture of the airship based on the control signals received from the airship antenna polarization tilting controlling unit and the airship antenna main beam steering controlling unit.

Claim 9 (new): The system for tilting polarization and steering main beam of airship antenna using GPS in claim 2, wherein the polarization and main beam direction correction operating device comprises:

an azimuth and elevation operating unit for computing the azimuth and elevation between the airship and the ground station based on the position information of the airship and the ground station received from the 1st GPS receiver and the 2nd GPS receiver;

a polarization correction operating unit for computing polarization correction value between the airship and the ground station based on the azimuth and elevation information received from azimuth and elevation operating unit and information received from the airship antenna database and the ground station antenna database; and

a main beam direction correction operating unit for computing main beam correction value between the airship and the ground station based on the azimuth and elevation information received from azimuth and elevation operating unit and information received from the airship antenna database and the ground station antenna database.

Claim 10 (new): The system for tilting polarization and steering main beam of airship antenna using GPS in claim 2, wherein the airship antenna database comprises:

an airship antenna polarization information extracting unit for extracting the information of polarization according to the posture of the airship antenna based on position information of the airship received from the 1st GPS receiver; and

an airship antenna main beam direction information extracting unit for extracting information of radiation pattern of the airship antenna based on the position information of the airship received from the 1st GPS receiver.

Claim 11 (new): The system for tilting polarization and steering main beam of airship antenna using GPS in claim 2, wherein the airship antenna database comprises:

a ground station antenna polarization information extracting unit for extracting the information of polarization according to posture of the ground station antenna 160 based on position information of the ground station received from the 2nd GPS receiver; and

a ground station antenna main beam direction information extracting unit for extracting the information of radiation pattern of the ground station antenna based on position information of the ground station received from the 2nd GPS receiver.